

**REMARKS**

**I. Status of the claims**

Claims 35-37 and 42-65 are pending in this application. Claim 35, the only remaining independent claim, has been amended to recite that at least one of  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^4$  and  $R^8$  is chosen from  $-NH-C(O)-R^{15}$ , wherein  $R^{15}$  is an aryl or a substituted aryl.<sup>1</sup> Support for this amendment appears throughout the specification. For example, the specification at page 22, discloses compounds of formula I and identifies  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^4$  and  $R^8$  as possibly chosen from  $-NH-C(O)-R^{15}$ , wherein  $R^{15}$  is defined as including an aryl or a substituted aryl. The specification discloses a number of compounds substituted in the manner claimed, including the two chemical structures disclosed on page 18 and various compounds disclosed in Table 1, beginning on page 50. The amended claims continue to read on the compound elected in the Response to Restriction Requirement filed on September 24, 2004.

Claim 36 has been amended to make reference to a compound of formula I as claimed in claim 35 or a physiologically tolerable salt of the compound. Claim 50 has been amended to correct a grammatical error. Claims 38-41 and 66-69 have been canceled without prejudice or disclaimer. Applicants reserve the right to pursue any canceled subject matter in a separate patent application. Lastly, as mentioned on page 2 of the Office Action, claims 52-65 have been withdrawn from consideration and the issue of rejoinder will be addressed upon allowance of the subject matter being examined.

**II. Restriction requirement and improper Markush group objection**

The restriction requirement dated September 7, 2004, divided the claims into six groups. The cancellation of claims 66-69 leaves the claims of groups I and II still pending. The claims of group I have been examined, while the claims of group II can be rejoined once the claims of group I are found allowable.

On pages 5-6 of the Office Action, the Examiner objected to claims 35-51 as being directed to an improper Markush group, stating that "[t]he improper Markush groups are  $B_6$ - $B_9$  and  $R^1$ - $R^8$ ." The Examiner concluded that amending the claims to the examined subject matter, which was outlined as being one single species defined in paragraph 7 of the Office Action, would overcome the objection.

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<sup>1</sup> The specification defines the terms "aryl" and "substituted aryl" on page 18, lines 6-8 and 12-15.

The pending claims should be in an acceptable form for examination. This application now contains one independent claim that possesses unity of invention. As indicated in MPEP § 803.02, it is improper for the Office to refuse to examine that which applicants regard as their invention where the claim does indeed possess unity of invention. Unity of invention exists in this instance because the compounds of the invention share a common utility (inhibition of I $\kappa$ B kinase) and share a substantial structural feature disclosed as being essential to that utility (the core structure of formula I). When the claim possesses unity of invention as in this instance, it should be examined in its entirety even if it were to include independent and distinct inventions. MPEP § 803.02. In view of the legal standards discussed above, applicants do not necessarily agree with the Examiner's statement on page 6 of the Office Action that "[t]he requirement for a proper Markush claim is that it includes only substances that in their physical, chemical and physiological characteristics are functionally equivalent."

Regarding the scope of the search, the Examiner has required, and applicants have provided, a provisional election of a single species. If applicants amend the claims to exclude what the Examiner believes to be relevant prior art, the prior art search "will be extended to the extent necessary to determine patentability of the Markush-type claim." MPEP § 803.02. As explained in more detail below, the documents cited in the Office Action do not anticipate the pending claims and do not render them obvious. Applicants therefore request that the Examiner conduct a search of the full scope of the claims.

### **III. First rejection under 35 U.S.C. § 102(b)**

The Examiner rejected claims 35-41 under 35 U.S.C. § 102(b) as being anticipated by the disclosure of U.S. Patent No. 4,731,358 to Huth et al., particularly in view of the compounds disclosed in columns 1-2 of the Huth patent.

Applicants respectfully traverse this rejection as it relates to pending claims 35-37. Claim 35 has been amended to recite that at least one of R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup> and R<sup>8</sup> is chosen from -NH-C(O)-R<sup>15</sup>, wherein R<sup>15</sup> is an aryl or a substituted aryl. Radicals R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup> and R<sup>8</sup> in formula I of the invention appear to correspond in position to radicals R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup>, R<sup>8</sup> and R<sup>4</sup> in the compounds of Huth, respectively. The definition of radicals R<sup>5</sup>-R<sup>8</sup> in Huth at col. 2, lines 4-7, does not, however, teach or suggest compounds of the invention having the recited substitution. For example, NR<sup>II</sup>R<sup>III</sup> at col. 2, line 5 of Huth (with R<sup>II</sup> and R<sup>III</sup> defined in col. 1, lines 48-52) does not teach or suggest a substituent -NH-C(O)-R<sup>15</sup> as

claimed, wherein R<sup>15</sup> is an aryl or a substituted aryl. For at least this reason, the rejection should be withdrawn.

**IV. Second rejection under 35 U.S.C. § 102(b)**

The Examiner rejected claims 35-40 under 35 U.S.C. § 102(b) as being anticipated by compounds disclosed in columns 79 and 92 of U.S. Patent No. 5,532,261 to DiNinno et al. Applicants also respectfully traverse this rejection as it relates to pending claims 35-37. The compounds disclosed in columns 79 and 92 of DiNinno do not teach or suggest compounds having a substituent -NH-C(O)-R<sup>15</sup> as claimed, wherein R<sup>15</sup> is an aryl or a substituted aryl. The compound cited by the Examiner at col. 79, and the compounds of Examples 32 and 33, include only a bromine substituent at a relevant position. Indeed, none of the chemical structures provided in columns 79-93 illustrate a substituent -NH-C(O)-R<sup>15</sup> as claimed. For at least this reason, the rejection should be withdrawn.


Applicants acknowledge that the Examiner has found claims 42-50 to be allowable if re-written in independent form. In view of the amendments and remarks above, however, applicants believe that all examined claims of group I should be in condition for allowance and that the withdrawn claims of group II may be rejoined for examination.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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